

STATE OF TENNESSEE **DEPARTMENT OF HEALTH ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL Lab Services - Jackson Regional Lab Jackson, TN 38301 731-426-0686

TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201

TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

Sent To:

Greg Denton

TDEC-WPC

6th Floor, L & C Tower Annex

401 Church Street

Nashville, TN 37243-1534

Michael Atchley

TDEC-WPC Knoxville FO

3711 Middlebrook Pike

Knoxville, TN 37921

K00003121 Lab ID:

Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code:

327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

K00003121001

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY012.1RO

Date/Time Collected: Sampler's Name:

11/17/2009 11:45

County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO:

Knoxville

Sampling Agency: **Billing Code: Send Report To:**

TDEC-WPC 327.34-20 TDEC-WPC **TDEC-WPC**

Agency Invoiced: Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.86

pH Units

Chlorine, residual:

Conductivity:

49

uMHO

Temperature:

11.09 Dissolved Oxygen: 10.47

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME.					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	17	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	17	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121002

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

T) (A. A.-I. O.-III

Project Site No.:

2

Station No.:

EMORY002.1RO

Date/Time Collected:

11/17/2009 09:30

Sampler's Name:

Geoff Klein

County: Sample Matrix:

ROANE - 73

Samp

Water

EFO:

Knoxville

Sampling Agency: Billing Code:

TDEC-WPC 327.34-20

Send Report To:

TDEC-WPC

Agency Invoiced: Priority Date:

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

nH:

8.07

pH Units

Chlorine, residual:

Conductivity:

53

uMHO

Temperature:

11.62

Dissolved Oxygen: 10.80

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	18	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	17	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

Sample Description:

K00003121003

Project Name:

TVA-Ash Spill

pH: Approx 100' downstream from middle dredge pc Chlorine, residual:

Field Determinations

Dissolved Oxygen: 10.99

Conductivity:

Temperature:

Other:

Flow:

8.01

54

11.49

pH Units

uMHO

mg/L

CFS

Sampler Project Name: TVA Ash Spill

Project Site No.:

2A

Station No.: Date/Time Collected: Dredge Plume

Sampler's Name:

11/17/2009 09:40 Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 **TDEC-WPC** TDEC-WPC

Agency Invoiced: Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

TEST: Alkalinity, Total	METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	19	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	17	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	47	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121004

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

2B

Date/Time Collected:

EMORY001.9RO 11/17/2009 09:55

Sampler's Name:

Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO:

Knoxville

Sampling Agency: **Billing Code:** Send Report To:

TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.76

pH Units

Chlorine, residual:

Conductivity:

58 11.54 uMHO mg/L

Temperature:

Dissolved Oxygen: 11.11

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME	METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	22	mg/L	3.8	10	M Chen	11/24/2009	

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	20	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable	METHOD: SM 2540F						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	11/18/2009	

TEST: Residue, Suspended	METHOD: SM 2540D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Suspended Solids	33	mg/L	10	10	A Peeples	11/20/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121005

Project Name:

TVA-Ash Spill

Sample Description:

Sampler Project Name: TVA Ash Spill

Emory River mile 1.7

Project Site No.:

3

Station No.:

EMORY001.7RO

Date/Time Collected:

11/17/2009 10:00

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20 **TDEC-WPC**

Send Report To: Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.47

pH Units

Chlorine, residual:

Conductivity:

111

uMHO

mg/L

Temperature:

12.50 Dissolved Oxygen: 11.16

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME					
ANALYTE	RESUĻT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	42	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	32	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121006

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

TYA A-L C-!!

Project Site No.:

4

Station No.:

EMORY000.1RO

Date/Time Collected:

11/17/2009 10:22

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: Priority Date:

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.68

pH Units

uMHO

mg/L

Chlorine, residual:

Conductivity:

233

02

Temperature: 14.02 **Dissolved Oxygen:** 9.67

Other:

Flow:

CFS

TEST: Alkalinity, Total	METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	120	mg/L	3.8	10	M Chen	11/24/2009	

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	92	mg/L	0.7	1	M Chen	11/23/2009	

TEST: Residue, Settleable	ME	THOD: SM 254				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended METHOD: SM 2540D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121007

Project Name:

TVA-Ash Spill

Sample Description:

Sampler Project Name: TVA Ash Spill

Clinch River mile 2.3

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected:

11/17/2009 10:50

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC

Send Report To:

327.34-20 **TDEC-WPC**

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009

13:45

Received By:

Ken Hitchman

Field	Determinations
nH:	7 55

Dissolved Oxygen: 9.97

Chlorine, residual:

Conductivity:

242

uMHO

pH Units

Temperature:

14.17

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	130	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	96	mg/L	0.7	1	M Chen	11/23/2009	

TEST: Residue, Settleable METHOD: SM 2540F						, <u>, , , , , , , , , , , , , , , , , , </u>
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended METHOD: SM 2540D							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Suspended Solids	U	mg/L	10	10	A Peeples	11/20/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121008

Project Name:

TVA-Ash Spill

Sample Description:

Sampler Project Name: TVA Ash Spill

Clinch River TVA Discharge Point

Project Site No.:

5A

Station No.:

KingAshOutF2

Date/Time Collected:

11/17/2009 11:05

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To:

TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.77

pH Units

Chlorine, residual:

Conductivity:

78

uMHO

Temperature: Dissolved Oxygen: 10.63

11.91

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	METHOD: EPA 310.2					
ANALYTE	RESULT UNITS MDL MQL ANALYZED BY:					
Total Alkalinity	32	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	31	mg/L	0.7	1	M Chen	11/23/2009	

TEST: Residue, Settleable	METHOD: SM 2540F						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009	

TEST: Residue, Suspended	METHOD: SM 2540D							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE		
Total Suspended Solids	10	mg/L	10	10	A Peeples	11/20/2009		

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121009

TVA-Ash Spill

Project Name:

pH: Clinch River mile 4.5 near Sugar Grove Valley F Chlorine, residual:

Sample Description:

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected: Sampler's Name:

11/17/2009 10:30

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC TDEC-WPC

Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

i omporataro.	17.20	
Dissolved Oxygen:	9.73	mg/L

7.52

253

pH Units

uMHO

Temperature: 14.29

Field Determinations

Conductivity:

Other:

Flow: **CFS**

TEST: Alkalinity, Total METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	130	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	96	mg/L	0.7	1	M Chen	11/23/2009	

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/18/2009

TEST: Residue, Suspended	ME.	THOD: SM 254	0D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit



STATE OF TENNESSEE DEPARTMENT OF HEALTH **ENVIRONMENTAL LABORATORIES**

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TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201

TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

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6th Floor, L & C Tower Annex

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Nashville, TN 37243-1534

Michael Atchley

TDEC-WPC

Knoxville FO

3711 Middlebrook Pike

Knoxville, TN 37921

K00003121 Lab ID:

Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code:

327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

K00003121001

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 12.1

Project Site No.:

Sampler Project Name: TVA Ash Spill

1

Station No.:

EMORY012.1RO

Date/Time Collected:

11/17/2009 11:45

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009

Received By:

Ken Hitchman

13:45

Field Determinations

:Hq

7.86

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature:

49

11.09

Dissolved Oxygen: 10.47

mg/L

Other:

Flow:

CFS

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	160	μg/L	2.9	10	A Wilson	11/19/2009

TEST: ICP-MS	ME	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	47	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	22	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.19J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	· U	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	U	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	48	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	0.99J	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	· U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.06J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	2.9J	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121001

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.: Station No.:

1

EMORY012.1RO

Date/Time Collected:

11/17/2009 11:45

Sampler's Name:

Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO:

Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC TDEC-WPC 11/27/2009

Priority Date: Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

7.86 pH:

Field Determinations

Chlorine, residual:

49

pH Units uMHO

Conductivity:

11.09

Temperature: Dissolved Oxygen: 10.47

mg/L

Other:

Flow:

CFS

TEST: Mercury	ME	ΓHOD: EPA 24	5.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00003121002

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

2

Station No.:

EMORY002.1RO

Date/Time Collected:

11/17/2009 09:30

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:** Send Report To:

TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009

13:45

Received By:

Ken Hitchman

Field Determinations

pH:

8.07

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature:

53 11.62

Dissolved Oxygen: 10.80

mg/L

Other:

Flow:

CFS

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	590	μg/L	2.9	10	A Wilson	11/19/2009	

TEST: ICP-MS	ME	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	210	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U ·	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	26	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.30J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	0.48J	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.48J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	61	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.2	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.05J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	7.3	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121002

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

2

Station No.:

EMORY002.1RO

Date/Time Collected:

11/17/2009 09:30

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: **Priority Date:**

TDEC-WPC TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Other:	_
Flow:	CFS

8.07

53

11.62

pH Units

uMHO.

mg/L

Field Determinations

Dissolved Oxygen: 10.80

Chlorine, residual:

Conductivity:

Temperature:

pH:

TEST: Mercury	ME	THOD: EPA 24	5.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121003

Project Name:

TVA-Ash Spill

Sample Description:

Approx 100' downstream from middle dredge pc Chlorine, residual:

Field Determinations

Dissolved Oxygen: 10.99

Conductivity:

Temperature:

pH:

Other:

Flow:

8.01

54

11.49

pH Units

uMHO

mg/L

CFS

Sampler Project Name: TVA Ash Spill

Project Site No.:

2A

Station No.:

Dredge Plume

Date/Time Collected:

11/17/2009 09:40

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC TDEC-WPC

Agency Invoiced: **Priority Date:**

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP	EST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	640	μg/L	2.9	10	A Wilson	11/19/2009	

TEST: ICP-MS	ME.	THOD: EPA 20	0.8		4	
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	680	μg/Ļ	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	3.3J	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	37	μg/L	2.5	. 5	M Pattanayek	11/19/2009
Beryllium	0.11J	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	υ	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.62J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	1.3	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	1.0	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	83	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.11J	μg/L	0.03	, 1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	5.7	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121003

Project Name:

TVA-Ash Spill

Sample Description:

pH:

Field Determinations

Dissolved Oxygen: 10.99

Conductivity:

Temperature:

Other:

Flow:

8.01

54

11.49

pH Units

uMHO

mg/L

CFS

Sampler Project Name: TVA Ash Spill

Approx 100' downstream from middle dredge pc Chlorine, residual:

Project Site No.:

Station No.:

2A

Dredge Plume

Date/Time Collected: Sampler's Name:

11/17/2009 09:40

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: Billing Code: Send Report To:

TDEC-WPC 327.34-20 TDEC-WPC TDEC-WPC

Agency Invoiced: **Priority Date:**

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

TEST: Mercury METHOD: EPA 245.1					
RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Ü	μg/L	0.029	0.2	A Bass	11/24/2009
		RESULT UNITS	RESULT UNITS MDL	RESULT UNITS MDL MQL	RESULT UNITS MDL MQL ANALYZED BY:

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

Lab-Sample Number: K00003121004 **Project Name:** TVA-Ash Spill

Sample Description: Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.: 2B

Station No.: EMORY001.9RO Date/Time Collected: 11/17/2009 09:55

Sampler's Name: Geoff Klein ROANE - 73

Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20

Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 11/27/2009

Date/Time Received: 11/17/2009 13:45

Received By: Ken Hitchman

Field Determinations
pH: 7.76 pH Units

Chlorine, residual:

Conductivity: 58 uMHO
Temperature: 11.54

Temperature: 11.54 **Dissolved Oxygen:** 11.11 mg/L

Other: CFS

TEST: Digestion Metals	METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	11/19/2009				A Wilson	11/19/2009	

TEST: ICP							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	960	μg/L	2.9	10	A Wilson	11/19/2009	

TEST: ICP-MS	ME	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	1200	µg/L	12.8	20	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	4.5J	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	51	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	0.22J	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	2.0J	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	1.0	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	2.8	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	2.0	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	95	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	2.8	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.14J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	4.6J	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	7.0	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121004

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

2B

EMORY001.9RO

Date/Time Collected: Sampler's Name:

11/17/2009 09:55

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency: Billing Code:

Knoxville TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC 11/27/2009

Date/Time Received:

Priority Date:

11/17/2009 13:45

Received By:

TEST: Mercury

Ken Hitchman

ME	THOD: EPA 245	5.1			
т.	UNITS	MDL	MQL	ANALYZED BY:	DAT

Field Determinations

Dissolved Oxygen: 11.11

Chlorine, residual:

Conductivity:

Temperature:

:Hq

Other:

Flow:

7.76

58

11.54

pH Units

uMHO

mg/L

CFS

RESUL1 ſΕ **ANALYTE** U 0.029 0.2 Mercury μg/L A Bass 11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00003121005

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.:

3

Station No.:

EMORY001.7RO

Date/Time Collected:

11/17/2009 10:00

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix:

EFO:

Water Knoxville

Sampling Agency: **Billing Code:** Send Report To:

TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.47

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature: 111

12.50 **Dissolved Oxygen:** 11.16

mg/L

CFS

Other: Flow:

TEST: Digestion Metals	METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	11/19/2009				A Wilson	11/19/2009	

TEST: ICP METHOD: EPA 200.7								
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE		
Iron	340	μg/L	2.9	10	A Wilson	11/19/2009		

TEST: ICP-MS	ME.	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	270	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	1.4J	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	32	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.31J	μg/L	0.04	1	M Pattanavek	11/19/2009
Copper	0.41J	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.44J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	61	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.2	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanavek	11/19/2009
Thallium	0.06J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	4.3J	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121005

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

TV/A Ach Spill

Project Site No.:

3

Station No.:

EMORY001.7RO

Date/Time Collected:

11/17/2009 10:00

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency: Billing Code: Knoxville TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: Priority Date: TDEC-WPC TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

TEST: Mercury METHOD: EPA 245.1						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

Field Determinations

Dissolved Oxygen: 11.16

Chlorine, residual:

Conductivity:

Temperature:

7.47

111

12.50

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit ...

K00003121006

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

Date/Time Collected:

EMORY000.1RO

Sampler's Name:

10:22 11/17/2009

County:

Geoff Klein ROANE - 73

Sample Matrix:

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.68

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature: 233

14.02

mg/L

Dissolved Oxygen: 9.67 Other:

Flow:

CFS

TEST: Digestion Metals	METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	11/19/2009				A Wilson	11/19/2009	

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	210	μg/L	2.9	10	A Wilson	11/19/2009

TEST: ICP-MS	ME ⁻	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	150	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	32	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.20J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	U	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.24J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	32	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.1	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.04J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	3.0J	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121006

Project Name:

TVA-Ash Spill

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

4

EMORY000.1RO

Date/Time Collected:

Sampler's Name:

11/17/2009 10:22 Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville TDEC-WPC

Billing Code: Send Report To:

327.34-20 **TDEC-WPC** TDEC-WPC

Agency Invoiced: Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

TEST: Mercury

Ken Hitchman

MET	THOD: EPA 245	5.1			
RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE

Field Determinations

Dissolved Oxygen: 9.67

Chlorine, residual:

Conductivity:

Temperature:

:Ha

Other:

Flow:

7.68

233

14.02

pH Units

uMHO

mg/L

CFS

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121007

Project Name:

TVA-Ash Spill

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

5

Station No.:

CLINC002.3RO

Date/Time Collected:

11/17/2009 10:50

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency: **Billing Code:**

Knoxville TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: **Priority Date:**

TDEC-WPC TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.55

pH Units

uMHO

Chlorine, residual:

Conductivity:

242

14.17

Temperature: **Dissolved Oxygen:** 9.97

mg/L

Other:

Flow:

CFS

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	150	μg/L	2.9	10	A Wilson	11/19/2009

TEST: ICP-MS METHOD: EPA 200.8						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	150	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	39	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.21J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	U	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.23J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	37	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.3	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.04J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	3.2J	μg/L	1. <u>9</u>	5	M Pattanayek	11/19/2009

K00003121007

Project Name:

TVA-Ash Spill

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected:

11/17/2009 10:50

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix:

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced:

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Priority Date:

Ken Hitchman

Field Determinations

pH:

7.55

pH Units

Chlorine, residual:

Conductivity:

242

uMHO

Temperature:

14.17

Dissolved Oxygen: 9.97

mg/L

Other:

Flow:

CFS

TEST: Mercury	METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121008

Project Name:

TVA-Ash Spill

Sample Description:

Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill

Project Site No.:

5A

Station No.:

KingAshOutF2

Date/Time Collected:

11/17/2009 11:05

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC 327.34-20

Billing Code: Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.77

pH Units

Chlorine, residual:

Conductivity:

78

uMHO

Temperature: **Dissolved Oxygen: 10.63**

11.91

mg/L

Other:

Flow:

CFS

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	300	μg/L	2.9	10	A Wilson	11/19/2009

TEST: ICP-MS METHOD: EPA 200.8						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	280	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	0.55J	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	2.0J	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	38	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.32J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	1.4	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.36J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	110	μg/L	0.42	1	M Pattanayek	11/19/2009
Nickel	1.2	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	0.09J	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	4.4J	μg/L	1.9	5	M Pattanayek	11/19/2009

K00003121008

Project Name:

TVA-Ash Spill

Sample Description:

Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

5A

Date/Time Collected:

KingAshOutF2

Sampler's Name:

11/17/2009 11:05 Geoff Klein

County:

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency: Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

11/27/2009

Date/Time Received:

11/17/2009 13:45

Received By:

TEST: Mercury

Ken Hitchman

1	METHOD: EP.	A 245.1	

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

Field Determinations

Dissolved Oxygen: 10.63

Chlorine, residual:

Conductivity:

Temperature:

7.77

78

11.91

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00003121009

TVA-Ash Spill

Project Name: Sample Description:

Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual:

Sampler Project Name: TVA Ash Spill

Project Site No.:

6

Station No.:

CLINC004.5RO

Date/Time Collected: Sampler's Name:

11/17/2009 10:30

County:

Geoff Klein

Sample Matrix:

ROANE - 73

Water

EFO: Sampling Agency: Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 11/27/2009

Date/Time Received:

11/17/2009

13:45

Received By:

Ken Hitchman

Field Determinations

pH:

7.52

pH Units

uMHO

Conductivity: Temperature: 253

14.29 **Dissolved Oxygen: 9.73**

mg/L

Other:

Flow: **CFS**

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/19/2009				A Wilson	11/19/2009

TEST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	130	μg/L	2.9	10	A Wilson	11/19/2009

TEST: ICP-MS	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	100	μg/L	6.4	10	M Pattanayek	11/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	11/19/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	11/19/2009
Barium	34	μg/L	2.5	5	M Pattanayek	11/19/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	11/19/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	11/19/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	11/19/2009
Cobalt	0.14J	μg/L	0.04	1	M Pattanayek	11/19/2009
Copper	U	μg/L	0.38	1	M Pattanayek	11/19/2009
Lead	0.16J	μg/L	0.10	1	M Pattanayek	11/19/2009
Manganese	31	μg/L	0.42	1 -	M Pattanayek	11/19/2009
Nickel	1.0	μg/L	0.25	1	M Pattanayek	11/19/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	11/19/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	11/19/2009
Thallium	U	μg/L	0.03	1	M Pattanayek	11/19/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	11/19/2009
Zinc	2.1J	μg/L	1.9	. 5	M Pattanayek	11/19/2009

K00003121009

Project Name:

TVA-Ash Spill

Sample Description:

Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual:

Field Determinations

Dissolved Oxygen: 9.73

Conductivity:

Temperature:

7.52

253

14.29

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected:

11/17/2009 10:30

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC TDEC-WPC 11/27/2009

Priority Date: Date/Time Received:

11/17/2009 13:45

Received By:

Ken Hitchman

TEST: Mercury	MET					
ANALYTE	RESULT	UNITS	MDL	MQL ANALYZED BY:	DATE	
Mercury	U	μg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit